

# SAFETY DATA SHEET

---

## SECTION 1: PRODUCT AND COMPANY INFORMATION

**Product name:** Medium H1

**Contact:**

Elixirgen Scientific, Inc.  
855 N. Wolfe St., Suite 619  
Baltimore, MD 21205  
Phone: 443-869-5420  
www.elixirgenscientific.com

---

## SECTION 2: HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4)  
Acute toxicity Inhalation (Category 4)  
Acute toxicity Dermal (Category 4)  
Flammable liquids (Category 4)

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal word**            Warning

#### Hazard statement(s)

H227                      Combustible liquid.  
H302 + H312 + H332      Harmful if swallowed, in contact with skin or if inhaled.

#### Precautionary statement(s)

P210            Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P261            Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264            Wash skin thoroughly after handling.  
P270            Do not eat, drink or smoke when using this product.  
P271            Use only outdoors or in a well-ventilated area.  
P280            Wear protective gloves/ protective clothing.  
P301 + P312    IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you  
                          feel unwell.  
P302 + P352    IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340    IF INHALED: Remove victim to fresh air and keep at rest in a position

- comfortable for breathing.
- P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
- P322 Specific measures (see supplemental first aid instructions on this label).
- P330 Rinse mouth.
- P363 Wash contaminated clothing before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None.

---

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS SUBSTANCE**

Substance/Mixture: Mixture

**Hazardous Ingredients**

Chemical Name	CAS-No.	GHS-US Hazardous Classification	Concentration (%)
Dimethyl sulfoxide	67-68-5	Flam. Liq. 4; H227	<=100

For the full text of the H-statements mentioned in this Section, see Section 16.

---

**SECTION 4: FIRST AID MEASURES**

**Description of necessary measures.**

**Eye contact**

Remove any contact lenses, locate eye-wash station, and flush eyes immediately with large amounts of water. Separate eyelids with fingers to ensure adequate flushing. Promptly call a physician.

**Skin contact**

Rinse skin thoroughly with large amounts of water. Remove contaminated clothing and shoes and call a physician.

**Inhalation**

Immediately relocate self or casualty to fresh air. If breathing is difficult, give cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

**Ingestion**

Wash out mouth with water; Do NOT induce vomiting; call a physician.

**Most important symptoms/effects, acute and delayed.**

The most important known symptoms and effects are described in the labelling (see section 2.2).

**Indication of immediate medical attention and special treatment needed.**

No data available.

---

**SECTION 5: FIRE-FIGHTING MEASURES****Suitable extinguishing media:**

Water spray, carbon dioxide, dry chemical powder or appropriate foam.

**Specific hazards arising from the substance or mixture:**

Carbon oxides, Sulphur oxides.

**Special protective equipment and precautions for firefighters:**

Wear self-contained breathing apparatus and protective clothing.

---

**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures:**

Use full personal protective equipment. Avoid breathing vapors, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Refer to protective measures listed in sections 8.

**Environmental precautions:**

Try to prevent further leakage or spillage. Keep the product away from drains or water courses.

**Methods and materials for containment and cleaning up:**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

---

**SECTION 7: HANDLING AND STORAGE****Precautions for safe handling:**

Avoid inhalation, contact with eyes and skin. Avoid dust and aerosol formation. Use only in areas with appropriate exhaust ventilation.

**Conditions for safe storage, including any incompatibilities:**

Keep container tightly sealed in cool, well-ventilated area. Keep away from direct sunlight and sources of ignition.

Recommended storage temperature: Store at -20°C.

---

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters:**

Chemical Name	Value	Control parameters	Basis
Dimethyl sulfoxide	TWA	250.000000 ppm	USA. Work place Environmental Exposure Levels (WEEL)

**Appropriate engineering controls:**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment:**

Eye protection:	Safety goggles with side-shields.
Hand protection:	Protective gloves.
Skin and body protection:	Impervious clothing.
Respiratory protection:	Suitable respirator.
Environmental exposure controls:	Keep the product away from drains, water courses or the soil. Clean spillages in a safe way as soon as possible.

---

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Aqueous solution.
Odor:	No data available.
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Oxidizing properties:	No data available.
Upper/lower flammability or explosive limits:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	No data available.
Solubility(ies):	No data available.
Partition coefficient: n-octanol/water:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

---

**SECTION 10: STABILITY AND REACTIVITY**

Reactivity:	No data available.
Chemical stability:	Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available.  
 Conditions to avoid: Strong acids, strong bases, strong oxidizing agents and pure organic solvents.  
 Incompatible materials: Strong acids/alkalis, strong oxidising/reducing agents.  
 Hazardous decomposition products: Under fire conditions, may decompose and emit toxic fumes.  
 Other decomposition products: No data available.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Acute toxicity**

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Dimethyl sulfoxide	= 14,500 mg/kg (Rat)	>5,000 mg/kg (Rabbit)	40250 ppm 4h (Rat)

**Skin corrosion/irritation:** No data available.  
**Serious eye damage/eye irritation:** No data available.  
**Respiratory or skin sensitization:** No data available.  
**Mutagenicity:** No data available.

**Carcinogenicity:**

Dimethyl sulfoxide

Rat – Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages:  
 Other: Tumors.

Mouse – Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukemia Skin and Appendages: Other: Tumors.\

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
 ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.  
 NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.  
 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

**Reproductive toxicity:**

Dimethyl sulfoxide

Rat – Intraperitoneal

Effects on Fertility: Abortion.

Rat – Intraperitoneal Effects on Fertility:	Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Rat – Subcutaneous Effects on Fertility:	Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Litter size (e.g., #fetuses per litter; measured before birth).
Mouse – Oral Effects on Fertility:	Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).
Effects on Embryo or Fetus:	Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

**Specific target organ toxicity:**

No data available.

**Aspiration hazard:**

No data available.

**Additional Information:**

Dimethyl sulfoxide

RTECS: PV6210000

Effects due to ingestion may include: Nausea, Fatigue, Headache

To the best of our knowledge, the chemical physical, and toxicological properties have not been thoroughly investigated.

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity:**

Dimethyl sulfoxide

Toxicity to fish:

LC50 – Pimephales promelas (fathead minnow) – 34,000 mg/l – 96h

LC50 – Oncorhynchus mykiss (rainbow trout) – 35,000 mg/l – 96h

Toxicity to daphnia and other aquatic invertebrates:

EC50 – Daphnia magna (Water flea) – 24,600 mg/l – 48h

(OECD Test Guideline 202)

Toxicity to algae: Duration 48h – mg/l: 9268

**Persistence and degradability:**

Dimethyl sulfoxide

Result: 31% - According to the results of tests of biodegradability this product is not readily biodegradable.  
(OECD Test Guideline 301D)

**Bioaccumulative potential:**

No data available.

**Mobility in soil:**

No data available.

**Results of PBT and vPvB assessment:**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

**Other adverse effects:**

No data available.

---

**SECTION 13: DISPOSAL INFORMATION**

Disposal of waste should be done in accordance with federal, state, and local regulations.

---

**SECTION 14: TRANSPORT INFORMATION**

**DOT (US):**

NA-NUMBER: 1993 CLASS: NONE PACKING GROUP: III

PROPER SHIPPING NAME: COMBUSTIBLE LIQUID, N.O.S. (DIMETHYL SULFOXIDE) (DIMETHYL SULFOXIDE)

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

---

**SECTION 15: REGULATORY INFORMATION**

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Fire Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

### **Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Dimethyl sulfoxide	67-68-5	2007-03-01

### **New Jersey Right To Know Components**

	CAS-No.	Revision Date
Dimethyl sulfoxide	67-68-5	2007-03-01

### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

---

## **SECTION 16: OTHER INFORMATION**

### **Full text of H-Statements referred to under sections 2 and 3.**

#### Dimethyl sulfoxide

Flam. Liq.      Flammable liquids  
H227            Combustible liquid.

### **HMIS Rating**

Health hazard: 0  
Chronic Health Hazard: \*  
Flammability: 2  
Physical Hazard 0

### **NFPA Rating**

Health hazard: 0  
Fire Hazard: 2  
Reactivity Hazard: 0

The information provided herein is based on sources believed to be reliable as of 11/21/2017 and pertains only to the material designated. Elixirgen Scientific, Inc. makes no warranty or representation to its completeness, accuracy, or currency, and assumes no liability resulting from its use. This material is intended for use by persons with pertinent technical skills for its intended use, the product's safe use, and the product's proper disposal. Disposal of hazardous material may be subjected to federal, state or local laws or regulations.

**Restriction of use:** For research use only.